

Summary of Meeting #14, of RTCA SC-186, Working Group 5
For the Development of a MOPS for UAT
<http://adsb.tc.faa.gov/ADS-B/186-subf.htm>

The meeting was held 17 – 20 June 2002, in the offices of RTCA in Washington DC in conjunction with the RTCA SC-186 Plenary, held 19 – 20 June 2002. The meeting was called to order at 9 a.m. on 17 June 2002 by Co-Chairman George Ligler. George welcomed all attendees and asked that each one introduce themselves and their organization. The attendees during all or part of the meeting sessions included:

John Ashley – Mitre Corp.	George Ligler – PMEI	Bernald Smith – SSA and FAI
Larry Bachman – JHU – APL	Tom Mosher – UPS Aviation Technologies	Tom Teetor – DCA
Bob Burns – Titan - FAATC - ACB-410	Vincent Nguyen – FAA – AND-510	Bill Thedford – Titan (USAF Hanscom AFB)
Mike Castle – JHU – APL	Tom Pagano – FAATC – ACB-410	David Thomas – Titan - FAATC - ACB-410
Gary Furr – Titan - FAATC - ACB-410	Brent Phillips – FAA - ASD	Ed Valovage – Sensis Corp.
Carl Gleason – Advancia – FAA/NISC	Ei Mon Phyu – Titan - FAATC ACB-410	Warren Wilson – Mitre Bedford
Richard Jennings – FAA (AIR-130)	Bob Saffell – Rockwell Collins	Tom Wright – JSC / IITRI
Stan Jones – Mitre CAASD	Stuart Searight – FAATC – ACB-410	

The following known regrets to attendance to this meeting were received prior to, or during the meeting:

- Bob Manning, L-2 Comm supporting USAF
 - Nikos Fistas, Eurocontrol Headquarters
1. George began the meeting by offering a few comments concerning the meeting of WG of the Whole of the AMCP, which met in Montreal concerning the possibility of starting the UAT SARPS effort. George indicated that 13 of the 21 members attended the session and that the vote to start the UAT SARPS now at risk was 10 of the 13 in favor. Those members voting against starting now were Germany, Iceland and Sweden. The ICAO Secretariat was also concerned about starting the effort before completion of further analyses. George indicated that a kickoff meeting of a UAT SARPS Subgroup, formed as a result of the WG of the Whole Meeting's recommendation, was tentatively being planned for the week of the September Joint RTCA/Eurocae Plenary to be held in Brussels. It is possible that SARPS for UAT could be approved in the 2006 timeframe. There will also be a meeting the week of 15 October 2002 in Kobe, Japan of the UAT Sub-Group in conjunction with AMCP WG C.
 2. The Working Group was asked to review and approve the Minutes to Meeting #13. Hearing no comment or request for change, the Minutes to Meeting #13 were accepted as published.
 3. The Working Group discussed the possibility of future meeting dates, given that the present meeting was scheduled to support SC-186 Plenary approval of the UAT MOPS, and no further meetings would be necessary until WG-5 would consider Revision A of this document. It was suggested by George Ligler and approved by the Working Group that WG-5 would meet formally, but briefly, in conjunction with RTCA Plenary until further regular meetings are necessary. The first such meeting was suggested to be held in conjunction with the Spring 2003 RTCA SC-186 Plenary, with date to be determined. The meeting would be scheduled for one day. The following table entry also shows the meeting dates of the scheduled Joint RTCA/Eurocae Plenary to be held in Brussels in September.

Dates/Time	Meeting Place
Fall 2002 Joint RTCA & Eurocae Plenary: 23 – 24 Sept.	Fall 2002 RTCA SC-186 Plenary scheduled for Monday & Tuesday, 23-24 September. This is not a WG-5 meeting, but many members will want to attend the Joint Plenary to discuss DO-242B consolidated requirements.
Spring 2003 RTCA SC-186 Plenary	Assumed to be held at RTCA, Washington DC. WG-5 will meet one day to discuss status and events since our last meeting in June 2002.

4. The Working Group briefly reviewed the results of Action Item 10-4 as presented by Larry Bachman and Mike Castle. Larry indicated that the results were part of the JHU-APL Comments to the Draft UAT MOPS to be included in Appendix K.
5. The Working Group then turned to the matter of addressing each of the 158 comments received as part of the RTCA SC-186 Ballot review process of the Draft UAT MOPS. There were no “Non-concur” comments received. During the review process, each comment was individually addressed and the disposition of each was captured in the file entitled “**Consolidated-UAT-comments.doc**” that will be posted on the ADS-B/UAT web site in the Meeting 14 table after the end of the meeting and all comments have been edited into the document.

As part of the Comment Review Process of the 158 comments, 157 were resolved by the Working Group, generally with the Comments’ Authors present. Four (4) ADS-B MASPS issues surfaced as a result of the comment reviews.

The one issue that WG-5 was unable to resolve without the Commentors’ approval was a comment from Ron Jones concerning whether or not the ADS-B system should be designed such that A3 units can see all other ADS-B System Participants of interest at 90 NM? DO-242A requires A2 units, for example, to be seen by A3 units at ranges up to 40 NM. The UAT design provides 40 NM air-to-air coverage in high density future airspaces for all aircraft over 18,000 feet. This issue was brought before the SC-186 Plenary and the Plenary’s decision was approve WG-5’s approach as meeting MASPS requirements while referring subsequent discussion of the issue to WG-6 as part of the consideration for changes relevant to DO-242B.

One of the other three issues that WG-5 agreed were ADS-B MASPS issues was a comment brought to WG-5 by Steve Creamer, Assistant Manager of the Air Traffic Division of the FAA in the Alaska Region, and Jim Cieplak of the Capstone Program Office. Steve and Jim pointed out that the current ATC ground infrastructure uses ATC-supplied 4096 (Mode 3/A) codes in combination with the Call Sign to uniquely identify flight plans for specific flight segments. After discussion of this issue within WG-5, it was agreed that the UAT MOPS would reserve one bit in the Mode Status Message for potential future use as a Call Sign alternating with some other indication, such as a 4096 code. This bit is required to be set to one (1) by the UAT MOPS. It is intended to have Capstone UAT equipment have the latitude to alternate the setting of the “Call Sign ID/4096 code” bit (as an approved deviation from the MOPS) to provide compatibility with existing ground infrastructure and facilitate operational implementation of ADS-B. Additionally, it was recommended by WG-5 that the

DO-242B effort take on this issue and evaluate its impact on ADS-B target acquisition, and confirm appropriate requirements.

The two other comments that WG-5 agreed were ADS-B MASPS issues were Comments 10 and 11 from UPS AT dealing with the “ON-GROUND/AIRBORNE” indication algorithm, DO-242A, Section 3.4.3.1.1. It was agreed during SC-186 Plenary that UPS would work with WG-6 to turn these comments into Issue Papers for consideration of change in DO-242B.

With these issues discussed and approved in SC-186 Plenary, the Draft UAT MOPS was approved by Plenary vote to be forwarded to the RTCA PMC with the changes identified in the “Consolidated-UAT-comments.doc” file for their review prior to publishing. The current schedule for the next meeting of the PMC for review of the UAT MOPS is not until September 2002.

6. **Action Item 10-4** was the only Action Item that remained open going into Meeting 14. It was resolved with the submission of the comment from JHU-APL for inclusion into Appendix K. There were no identified **Action Items** identified during this meeting, except those recorded by SC-186 for carrying forward those comments that were identified as ADS-B MASPS comments to be considered for revision in DO-242B.
7. There was only one Working Paper submitted for consideration for Meeting 14. Working Paper UAT-WP-14-01 describes how the Application Data field of a UAT Ground Uplink message might be used to transport FIS-B uplink services to airborne participants. A new method is proposed such that multiple uplink services (FIS-B, TIS-B ...) can define their own data product formats independent from each other. Because of the amount of discussion devoted to the 158 comments received on the UAT MOPS, WG-5 was not able to discuss this Working Paper during the meeting schedule. It is requested that each WG-5 member review this Working Paper and send any comments directly to Tom Mosher so that he can incorporate those comments prior to submitting this to the Working Group that is modifying the FIS-B MASPS.

Working Paper	Description	Presented By:	Size
14-01	Proposed Text for the FIS-B MASPS Appendix F Describing the UAT FIS-B Uplink	Tom Mosher	40KB

All Working Papers for all WG-5 Meetings, as well as the Meeting Agendas, Meeting Minutes, Meeting Schedules and files leading to the production of the UAT MOPS will continue to be posted on the ADS-B UAT web site located at: <http://adsb.tc.faa.gov/ADS-B/186-subf.htm>